

Claims

1. Electromagnetic hysteresis unit (1, 23) with magnetic north poles (4) which around an axis of rotation (14), at a distance in peripheral direction (15) from south poles (5) and alternating them, is situated in a magnet body (2, 3) which comprises a magnet coil (6) wherein with slight play relative to said poles (4, 5), a moveable hysteresis ring (16) connected with the rotor (17) is provided, characterized in that the peripheral surfaces of the north poles (4) and south poles (5) lie in the same circle and opposite to the same peripheral surface of said hysteresis ring (16).

2. Hysteresis unit (1, 23) according to claim 1, characterized in that said hysteresis ring (16) surrounds said north pole (4) and said south pole (5).

3. Hysteresis unit (1, 23) according to any one of the preceding claims, characterized in that said poles are formed by pole fingers (4, 5) which, departing from axial front walls of said magnet body (2, 3), are aligned upon each other and have from each other a greater distance than from said hysteresis ring (16).

4. Hysteresis unit (1, 23) according to claim 3, characterized in that said pole fingers (4, 5) overlap in peripheral direction (15).

5. Hysteresis unit according to claim 4, characterized in that said pole fingers (4, 5) taper toward their free end in axial direction and/or in peripheral direction (15).

6. Hysteresis unit (1, 23) according to any one of the preceding claims, characterized in that said hysteresis ring (16) is embedded in said rotor (17) which consists of material having good heat conductivity.

7. Hysteresis unit (1, 23) according to claim 6, characterized in that said rotor (17) has cooling devices (18).

8. Hysteresis unit (1) according to any one of the preceding claims, characterized in that said magnet body (2, 3) is radially divided in the area of said magnet coil (6), both parts (2, 3) being centered relative each other and interconnected via a centering ring (8).

9. Hysteresis unit (1, 23) according to any one of the preceding claims, characterized in that said magnet body (2) is disposed fastened on the housing and the current supply (7) is shifted through a free space (19) formed between said pole fingers (4, 5), said rotor being designed pot-shaped open on one side.

10. Hysteresis unit (1, 23) according to any one of claims 3 to 9, characterized in that said pole fingers (4, 5) are interconnected by a magnetizable material.

11. Hysteresis unit (1, 23) according to claim 10, characterized in that said material, preferably brass, has good heat conductivity.

12. Hysteresis unit (1, 23) according to claim 10 or 11, characterized in that said pole fingers (4, 5) are shrunk upon a connecting ring (27).

13. Hysteresis unit (1, 23) according to any one of claims 10 to 12, characterized in that the intermediate spaces between said pole fingers (4, 5) are filled with a non-magnetizable filling component (28).

14. Hysteresis unit (23) according to any one of claims 10 to 11, characterized in that it is designed as clutch by an outer part (25) with said pole finger (5) of said magnet body (2) being separated from the latter by a thin annular gap (26) and said second magnet body (3) sitting with a small gap (29) rotatably relative to said magnet body (2) upon a rotatable part to be coupled while the first magnet body (2) is mounted fastened on the housing.

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